

those of the *silk* are *small, round, hard, transparent*, and to their bigness proportionably *stiff*, so as each filament preserves its proper *Figure*, and consequently its vivid *reflection* intire, though twisted into a thread, if not too hard; those of *Flax* are *flat, limber, softer, and less transparent*, and in twisting into a thread they joyn, and lie so close together, as to lose their own, and destroy each others particular reflections. There seems therefore three Particulars very requisite to make the so drest *Flax* appear *Silk* also when spun into threads. First, that the substance of it should be made more *clear and transparent*, *Flax* retaining in it a kind of opacating brown, or yellow; and the parts of the whitest kind I have yet observ'd with the *Microscope* appearing white, like flaw'd Horn or Glasse, rather than clear, like clear Horn or Glasse. Next that, the filaments should each of them be *rounded*, if that could be done, which yet is not so very necessary, if the first be perform'd, and this third, which is, that each of the small filaments be *stiffned*; for though they be square, or flat, provided they be *transparent* and stiff, much the same appearances must necessarily follow. Now, though I have not yet made trial, yet I doubt not, but that both these proprieties may be also induc'd upon the *Flax*, and perhaps too by one and the same Expedient, which some trials may quickly inform any ingenious attempter of, who from the use and profit of such an Invention, may find sufficient argument to be prompted to such Inquiries. As for the *tenacity* of the substance of *Flax*, out of which the thread is made, it seems much inferiour to that of *Silk*, the one being a *vegetable*, the other an *animal* substance. And whether it proceed from the better concoction, or the more homogeneous constitution of *animal* substances above those of *vegetables*, I do not here determine; yet since I generally find, that *vegetable* substances do not equalize the *tenacity* of *animal*, nor these the *tenacity* of some purified *mineral* substances; I am very apt to think, that the *tenacity* of bodies does not proceed from the *hamons*, or *hooked* particles, as the *Epicureans*, and some modern *Philosophers* have imagin'd; but from the more exact *congruity* of the constituent parts, which are contiguous to each other, and so bulky, as not to be easily separated, or shatter'd, by any small pulls or concussion of heat.

Observ. IV. Of fine waled Silk, or Taffety.

Schem. 3.
Fig. 1.

This is the appearance of a piece of very fine Taffety-riband in the bigger magnifying Glasse, which you see exhibits it like a very convenient substance to make Bed-matts, or Door-matts of, or to serve for Bee-hives, Corn-scuttles, Chairs, or Corn-tubs, it being not unlike that kind of work, wherewith in many parts in *England*, they make such Utensils of Straw, a little wreathed, and bound together with thongs of Brambles. For in this Contexture, each little filament, fiber, or clew of the *Silk-worm*, seem'd about the bigness of an ordinary Straw, as appears by the little irregular

Fig: 1

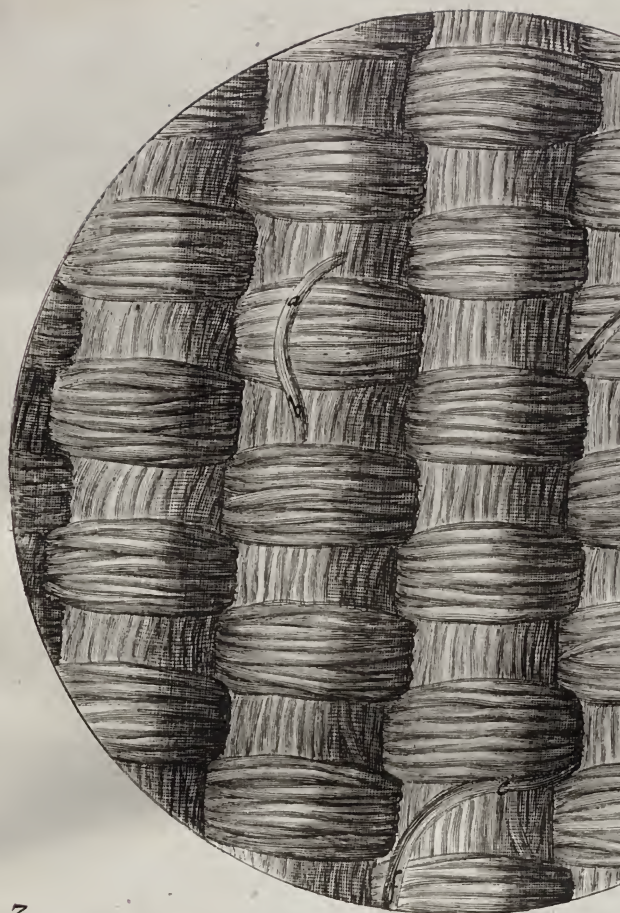


Fig: 3



Fig: 2

